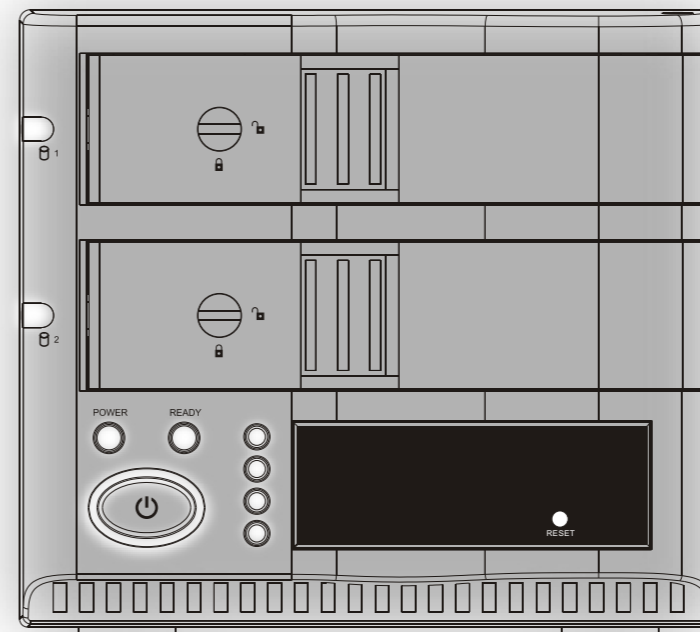


1328-NAS



USER MANUAL

General Description

The 1328NAS is a fully functional gigabit NAS design with dual SATA interface. It provides superior performance and functionality for Router Gateway, NAS, IP Set Top Box, VoIP and other SME and SOHO applications. The device has single 32-bit ARM9 RISC Processors with up to 800MIPS total performance. The device integrates a full featured hardware crypto engine, two 10/100/1000 Ethernet MACs, dual USB2.0 hosts or clients, dual SATA interfaces. The device also includes an intelligent and programmable power management unit for portable system applications.

Ordering Information

Part Number	Temperature Range	Package
1328NAS	0°C to 70°C	White Box

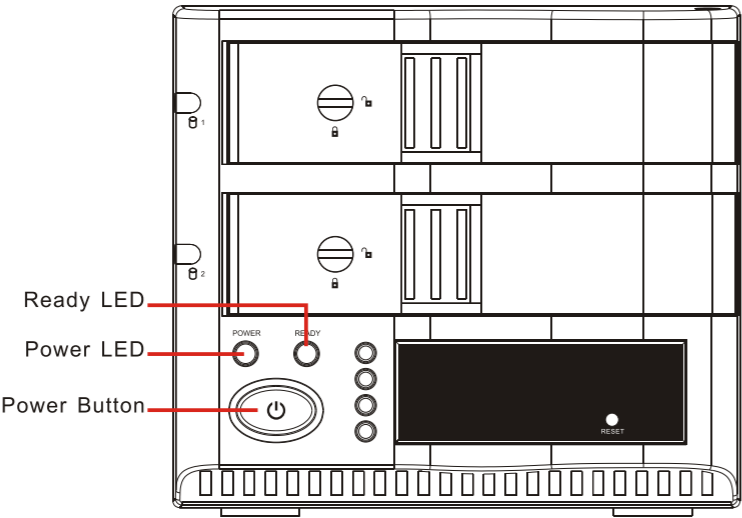
Revision History

Version No.	Date	Summary of Changes
1.0	March. 2008	Preliminary release

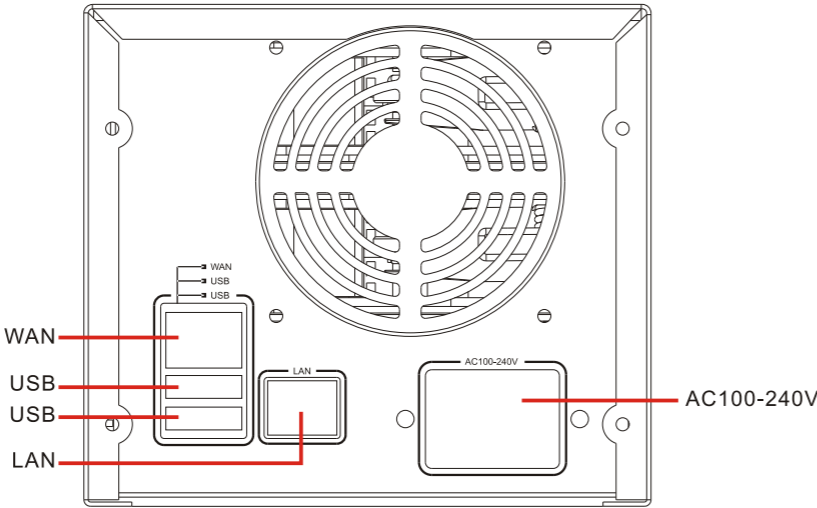
MENU


MENU	1
1.0 Connect the AC power Cable included in the evaluation kit	2
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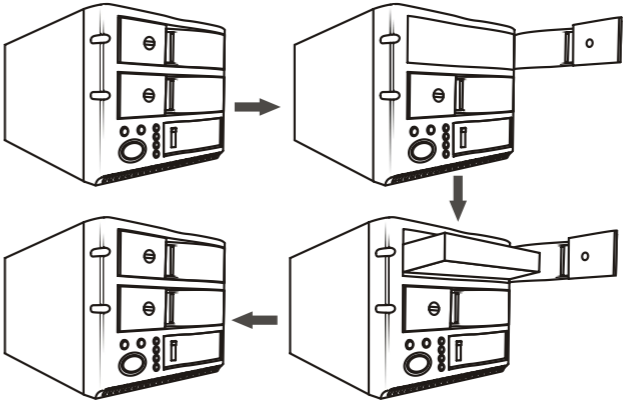
1.0 Connect the AC power Cable included in the evaluation kit





Connect the AC power Cable included in the evaluation kit
Connect the LAN cable to the "LAN" port
Connect the SATA hard drive to P1 and P2.
Press <Reset> button for hardware reset
Press <Power > button for power ON/OFF
Note: The 1328NAS start-up will cost about 3 minutes, then the Ready LED is flash; if the start-up is complete, the Ready LED will always ON. Then, you can operate the 1328NAS through the GUI.



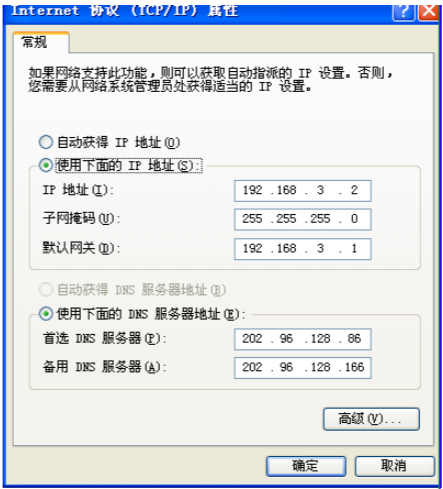
The Hard Disk Installation: Sway from side to side the lock , and pull the doorknob to insert 1 or 2 hard disk. Close the doorknob and the installation will be completed (The step will be represented in terms of following graphs)



Note: Sway from side to side the lock at the instructed point , which you could open the doorknob to install/ unload the hard disk. In Contrast, when you sway from side to side the lock at the instructed point , then you may not open it.

2.0 Operating 1328NAS through GUI
2.1 Set the 1328NAS IP Address

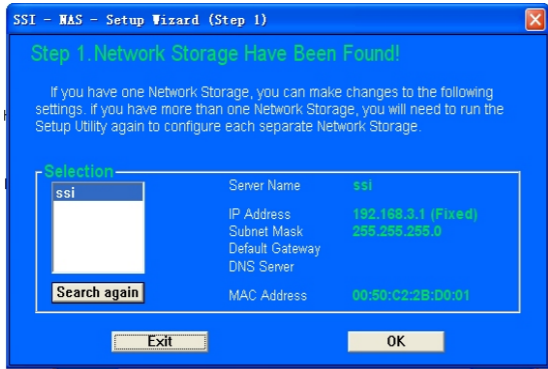
Note: Before you start use the 1328NAS, please connect the 1328NAS <LAN port> to your PC by LAN cable.
The 1328NAS default IP is : 192.168.3.1;
So, you must set your PC IP is:192.168.3.X;



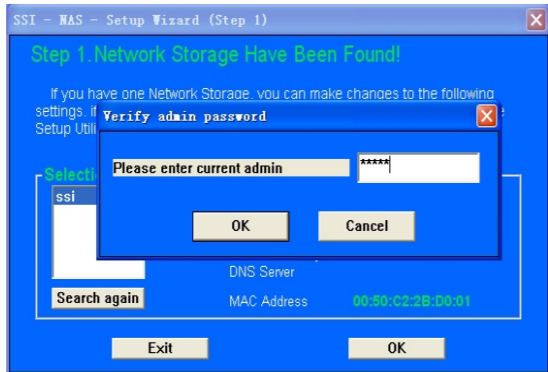
Please find the <Setup Util.exe> software from the CD , and then copied it to your desktop installation. Select the <Setup>.



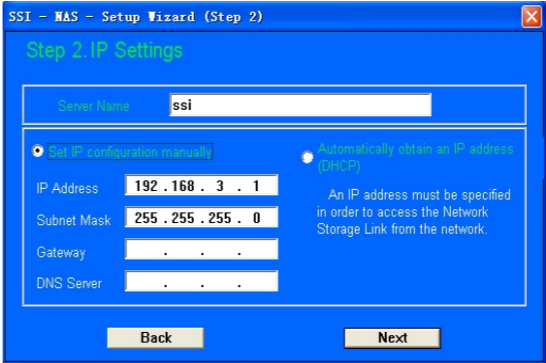
The 1328NAS will be found in the <Selection>.Press the <OK>.



Please Input the default password: admin , and press <OK>.

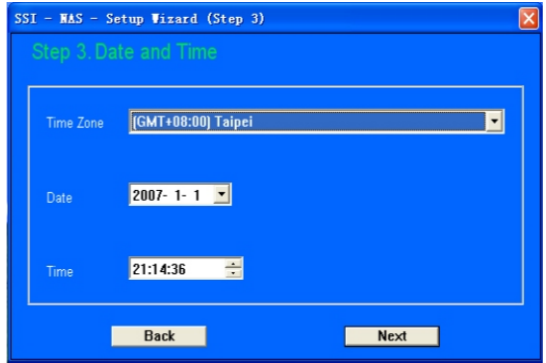


Then you can change the 1328NAS Name IP address.

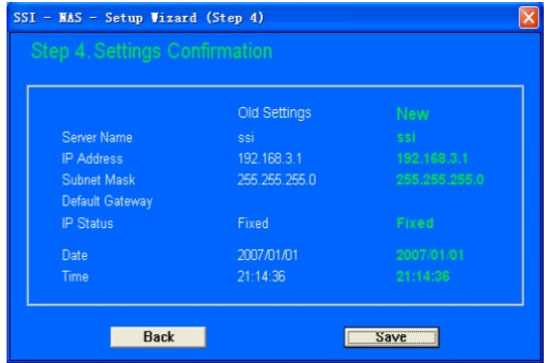


Note: Please remember your IP address, or not you may be lost all the information !!!

Press the <Next>, you can set the Date and Time.



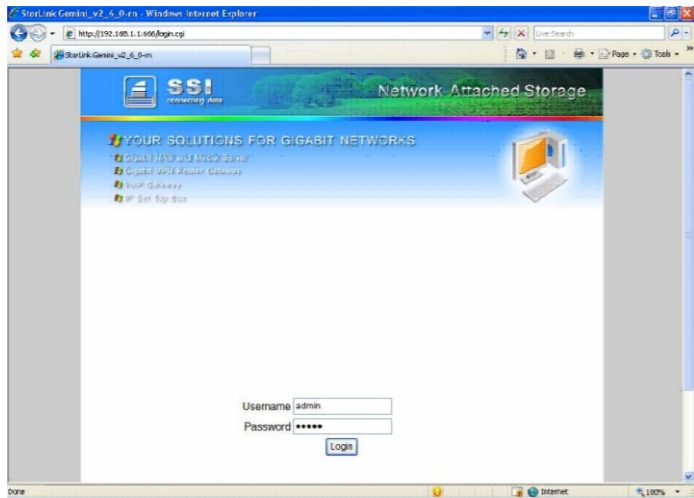
Press the <Next>, you can see the Setting Confirmation, Press the <Save>, complete the change.



Explorer 5.0 or later, Netscape Navigator 4.5 or later) to complete administrative task of 1328NAS.

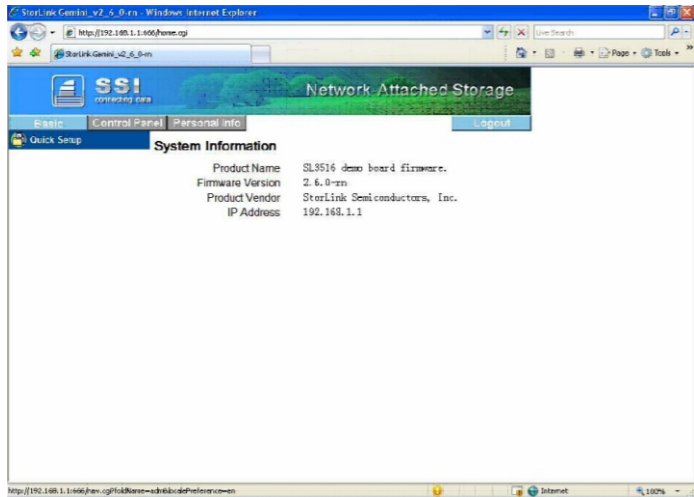
2.2 Administration of the 1328NAS

The following methods allow an administrator to access the administration page
Launch your web browser if you know the IP address of the 1328NAS. Type the correct IP address in the browser.
Note: The 1328NAS default IP is : 192.168.3.1
Input the username and password in the login page, “admin” is the username and password by default; change security privilege is recommended.



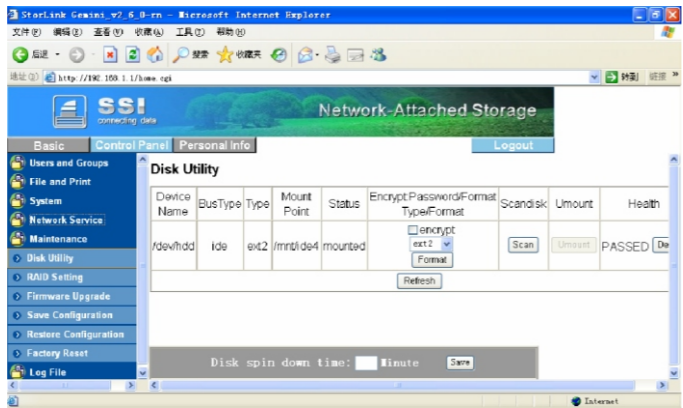
2.3 1328NAS Configuration

After login to the 1328NAS by browser, there are 3 main selections: “Basic”, “Control panel”, and “Personal Info” included and the related items expansion list below .



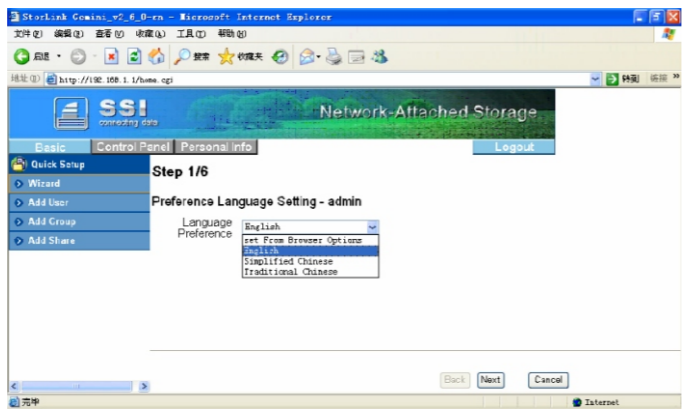
- Basic
 - Quick Setup
 - Wizard
 - Add User
 - Add Group
 - Add Share
 - Control panel
 - Users and Groups
 - User Management
 - Group Management
 - File and Print
 - File Server
 - Share Management
 - Printer Server
 - System
 - LAN Settings
 - WAN Settings
 - DDNS
 - Qos
 - Turn Off Server
 - Time Settings
 - Information
 - Disk Usage
 - Error Notification
 - Network Service
 - DHCP Server
 - Bonjour
 - Virtual Server
 - ALG
 - Access Control
 - MAC Address Clone
 - BTorrent
 - Maintenance
 - Disk Utility
 - RAID Setting
 - Firmware Upgrade
 - Save Configuration
 - Restore Configuration
 - Factory Reset
 - Log File
 - Samba Log
 - FTP Log
 - DHCP Server Log
 - System Log
 - Administration Log
 - Personal Info
 - Personal Information
 - Account

HDD is detected whether installed or not by system automatically. A new non-formatted HDD was found, formatting hard drive is suggested by the pop up window. And the system will restart after format complete automatically. If a formatted HDD is found, then the system gets user information from HDD.



2.4 Quick Setup

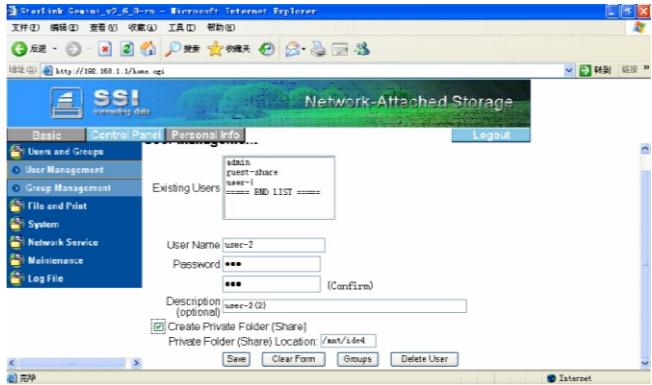
To modify the language support in web page, please follow the instruction below



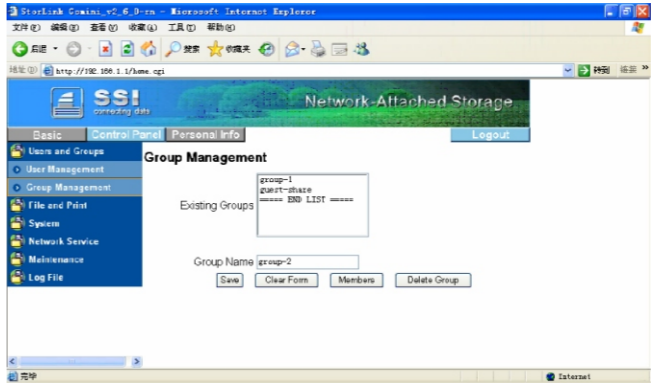
To add user support, select the Add User chapter for setting. Please refer to Users and Groups chapter for more detail.
To add group support, select the Add Group chapter for setting. Please refer to Users and Groups chapter for more detail.
To add folder sharing support, select the Add Share chapter for setting. Please refer to Share Management chapter for more detail.

2.5 Users and Groups

In User Management menu, it shows all existing users in the system. A new user is created by filling out the form and click “Save” button. To delete a specified user, you need to select the existing user and click “Delete User” button. Click “Group” button to enter the Group management menu.

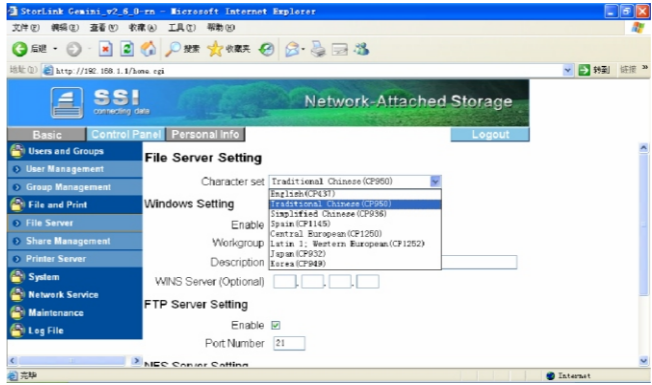


In Group Management menu, it shows all existing groups in the system. A new group is created by filling out the form and click “Save” button. Select the existing group name and click “Delete Group” button to delete a specified group. Add or Remove users from an existing group can be done by highlighting the group name and click “Members” button.



2.5 File and Print

Three sections are included in “File and Print”, which are “File server”, “Share Management”, and “Printer server”.



2.6 File and Print

2.6.1 File Server

Windows Setting

Click “Enable” check box to enable Microsoft Windows connection

Set Workgroup name for Windows client to access

Define Windows Internet Name Server IP address

FTP Server setting

Click “Enable” box to enable FTP server function, and default port 21.

NFS Server Setting

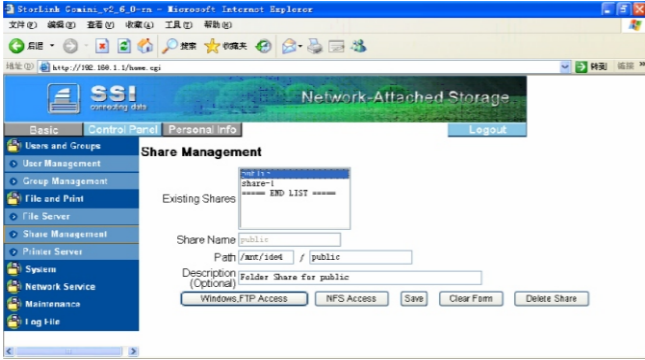
Click “Enable” box to enable NFS server function

Guest Access Setting

Click “Enable” box to allow user using guest-share folder and guest-user set upload quota (Mega Bytes)

2.6.2 Share Management

It shows all existing shared names; “public” was the factory default share name located at system /shares/public directory.



Create Share

Press “Save” button, after fill in “Share name” and “Path” box, will create a new share name.

Property Change

Click a share name in “Existing Shares” box could modify property of the share name. Press “Windows, FTP Access” or “NFS Access” button could set or remove read/write permission of the share.

Windows and FTP Access

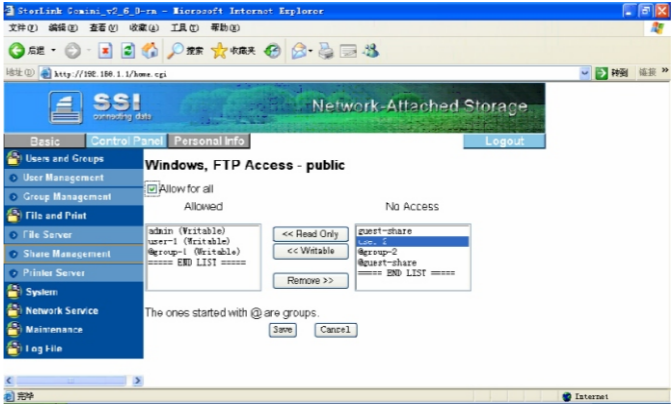
“Allow for all” is to allow all users to access the shared storage in the server; or you may specify User/Group name in Access box and select “Read Only” or Writable permission to the User/Group.

NFS Access

You could check “Allow for all” to allow all clients access NFS server. Or add client PCs IP address/Subnet mask to the permission list to allow only permission list to access the NFS server.

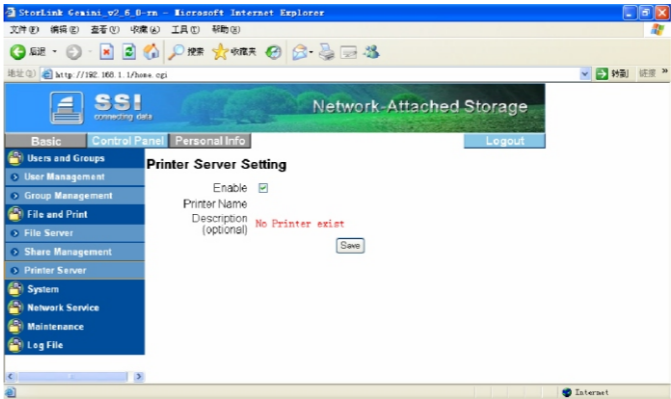
Delete Share

“Delete Share” deletes a specified share name.



2.6.3 Printer Server

Check Printer Server “Enable” box to enable Print Server functions.



2.7 System setting

There are eight sections are included in “System Setting”, which are “LAN Settings”, “WAN Settings”, “DDNS”, “Qos”, “Time Settings”, “Turn Off Server”, “Information”, “Disk Usage”, and “Error Notification”.

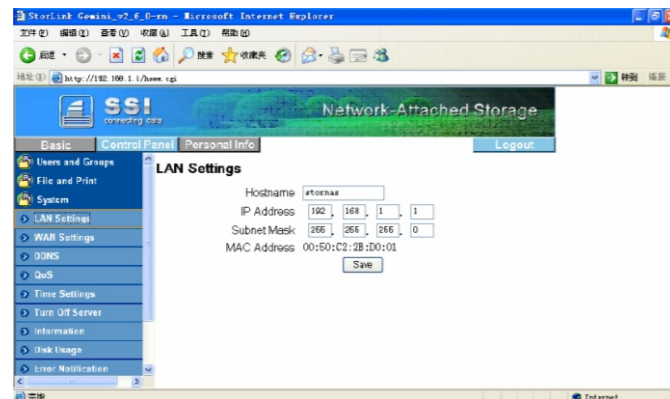
2.7.1 LAN Settings

Hostname

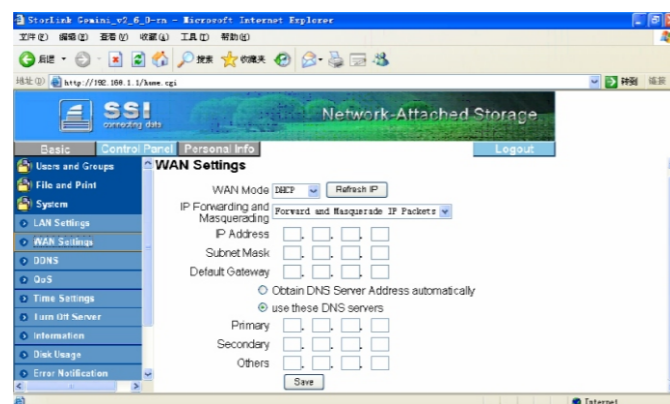
You must assign a unique name for each 1328NAS as the identification within your local area network.

IP address setting

The LAN port is connect your local area net work



2.7.2 WAN Settings



The WAN port can connect the inter network or external local area network. Note: the IP address of LAN and WAN can not in the same paragraph!!! For example, the WAN IP address is: 192.168.1. X, then the LAN IP address could not be: 192.168.1. X, but should be: 192.168.0. X, or 192.168.2. X.

Use static IP address

Acquire a unique IP address, Subnet mask, and Default gateway information from your network system administrator.

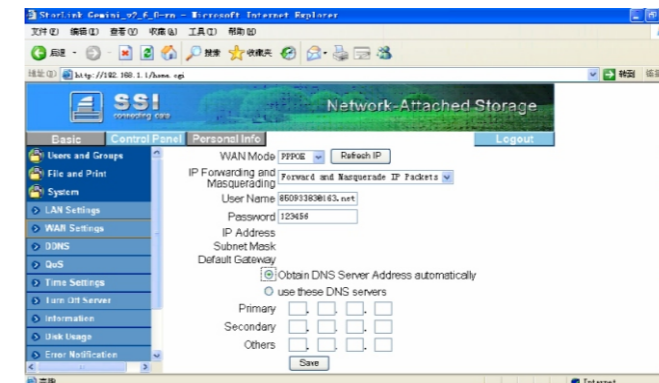
DHCP

The system obtains the IP address automatically via DHCP protocol if the external local network has DHCP server available. Press the <Refresh IP>, and save it. Obtain DNS server address automatically

The system gets DNS server addresses from DHCP server if available

Use PPPOE Obtain the IP addresses

The 1328NAS provides superior performance and functionality for Router Gateway. You can get the User Name and password from your Telecommunications providers.



2.7.3 DDNS

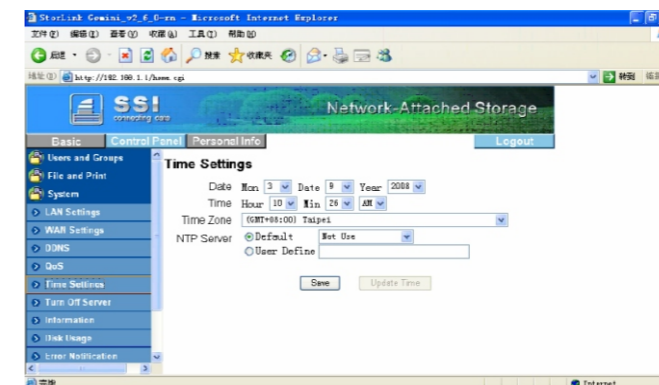
DDNS(Dynamic DNS) service allows you to assign a fixed domain name to a dynamic WAN IP address. This allows you to host your own Web, FTP or other type of TCP/IP server in your LAN. Before configuring DDNS, you need to visit www.dyndns.com and register a domain name. (The DDNS service is provided by DynDNS.org)

2.7.4 Qos

Quality of Service (QoS) refers to the capability of a network to provide better service to selected network traffic over various technologies. The primary goal of QoS is to provide priority and improved loss characteristics. Also important is making sure that providing priority for one or more flows does not make other flows fail.

Note: This function is only suitable for professional MIS.

2.7.5 Time Setting



Set current Date, Time and Time zone.
Specify NTP server if you want to get Date and Time from time server.

2.7.6 Turn Off Server

To restart the server, click the "Restart" button.

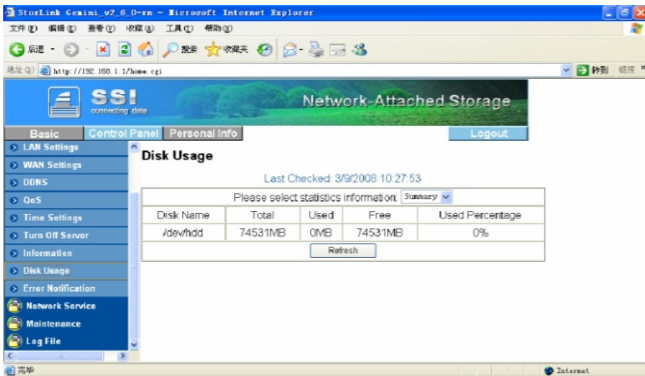
2.7.7 Information

Display system information, such as:

System Information	
Product Name	SL3516 demo board firmware.
Firmware Version	2.6.0-rn
Product Vendor	StorLink Semiconductors, Inc.
IP Address	192.168.0.1

2.7.8 Disk Usage

Collect and display all HDDs usage summary and user's quota information.



2.7.9 Error Notification

Monitoring Services Setting:

Disk Usage

If the disk usage reaches 90%, the system will inform the administrator this message.

Windows File Sharing Server

If the samba task has any problem, the system will inform the administrator this message.

FTP Server

If the FTP Server task has any problem, the system will inform the administrator this message.

DHCP Server

If the DHCP Server task has any problem, the system will inform the administrator this message

Check Interval

You can select the system informed interval to hourly or daily.

Email Notification Setting:Enable

Enable notification method by an email.

Error Handling Mail Server

Specify your email host name.

Error Handling Email Addresses

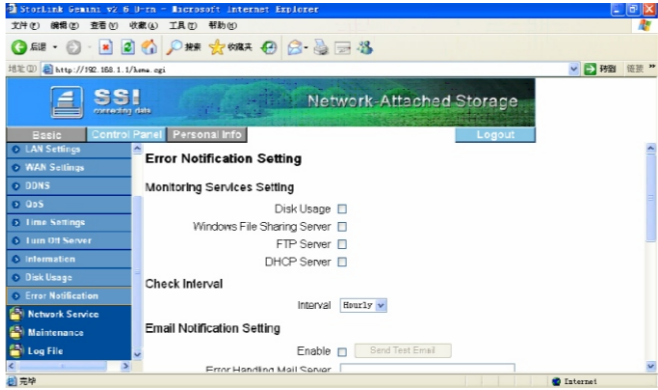
Specify administrator email address.

Pop-Up Notification Setting:Enable

Enable notification method by Windows pop-up messages.

Error Handling Pop-Up Machines

Specify administrator PC IP address.

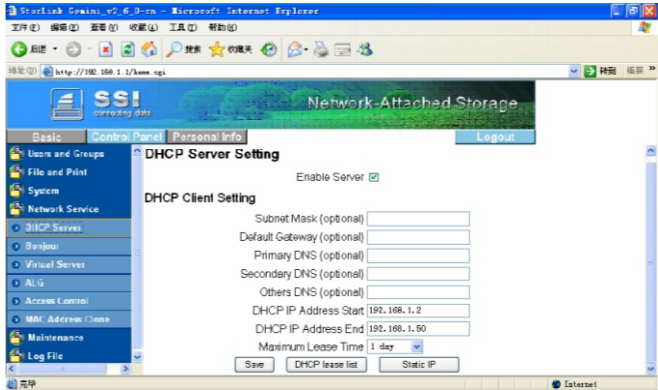


2.8 Network Service

2.8.1 DHCP Server

The 1328NAS service allows your PC to get an IP address from the NAS.

If your PC can not get an IP address from the NAS, you should set your PC IP address to a static IP address.



2.8.2 Bonjour

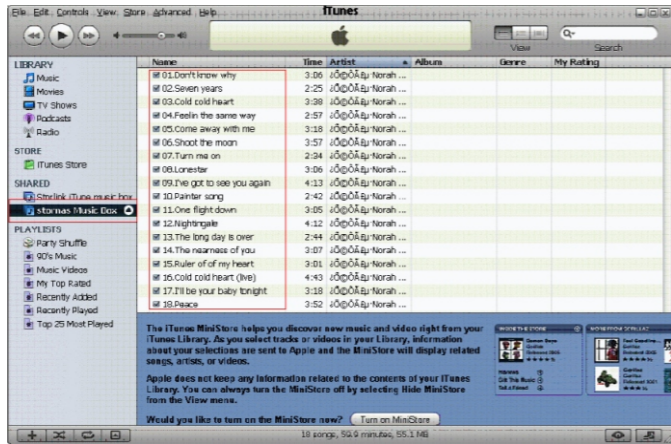
1328NAS supported Apple Bonjour protocol and Apple iTunes server.

Check Enable box could enable Bonjour protocol.

Check iTunes Enable box could enable iTunes server.

All of MP3 music files should be put in /public/music folder through samba or ftp protocol, then client pc can search SL93516N_BRD and play music within iTunes tool. The iTunes tool can be download from Apple website.

Note: These 3 functions below is only suitable for professional MIS.



2.8.3 Virtual Server

2.8.4 ALG

2.8.5 Access Control

2.8.6 BTorrent

1328NAS supported BTorrent P to P download function. You can download the seed to the system by input the correct path and the seed name in the “Open torrent file” Box, or browse by Windows explorer.

Set Max bandwidth down rate limit

Set Max bandwidth up rate limit

Add button

☐ This is used to add new seed to system. Start button

Start button

☐ This is used to start download job.

Stop button

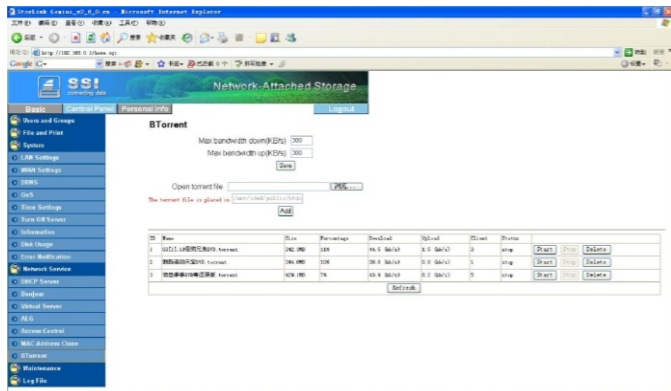
☐ This is used to stop download job.

Delete button

☐ This is used to delete job.

Refresh button

☐ This is used to refresh BTorrent job status.



2.9 Maintenance

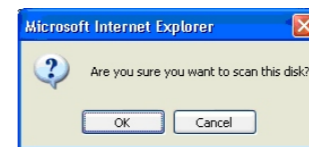
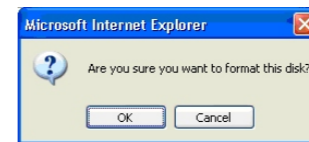
Six sections are included in Maintenance. There are “Disk Utility”, “RAID Setting”, “Firmware Upgrade”, “Save Configuration”, “Restore Configuration”, and “Factory Reset”.

2.9.1 Disk Utility

Disk utility shows device name, type of file system, total disk size, used disk size, volume mounted, and disk mount status of all disks.

For new attached hard disk, you should format the HDD before any setting.

To avoid pressing the button by mistake, the system will acquire your confirmation before starting “Format” or “Scandisk” function.



Encrypt Box

1328NAS supports 128 bits loop-AES encryption of EXT2 file system. If you want to turn on this function, you should input 20 characters password and format disk again.

Format Button

This is used to format the specified disk. SL93516N_BRD supports three types of file system: “EXT2”, “EXT3”, and “FAT32”. Scan Button

This is used to check the disk integrity.

Detail Button

If the hard disk supports S.M.A.R.T, it will report the disk health status.

Disk spin down time

Specify your disk spin down time without access the hard disk. If you plug-in an USB disk, it will mount this disk to /mnt/USB1 and share folder name “usb1” on Samba or FTP.

2.9.2 RAID Setting

1328NAS supported RAID type 0, 1 and Line that depends on hard driver amount.

1328NAS only plug in 2 hard driver, the RAID function can be used.

This is used to format hard driver from ext2 to ext3 or from ext3 to ext2 file system.

Scan Button

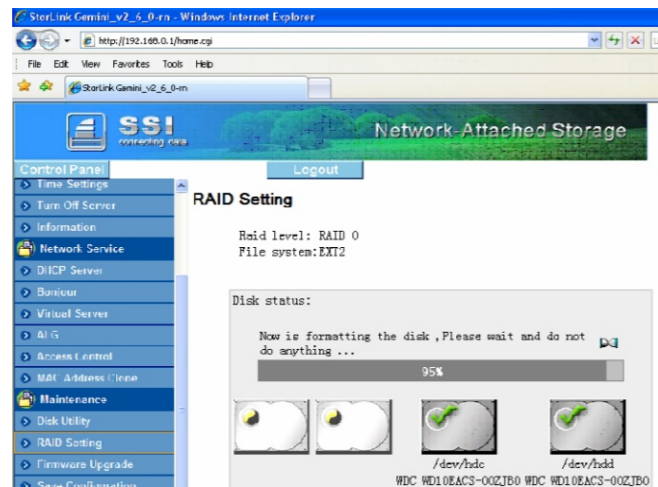
This is used to check the disk integrity

Refresh button

This is used to refresh hard driver status.

Rebuild button

This is used to rebuild raid file system when hard driver broken.

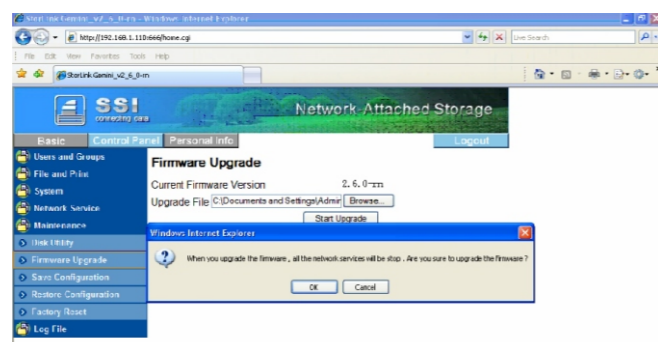


2.9.3 Firmware Upgrade

This function shows “Current Firmware Version”, you can download the latest firmware version to the system by input the correct path and the upgrade file name in the “Upgrade File” Box, or browse by Windows explorer. When you upgrade the firmware, all the network services will stop.

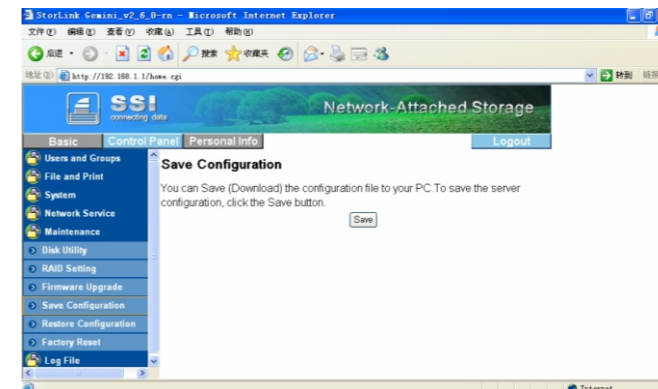
The system counts down and reboots when download completes.

Note: when 1328NAS is in Firmware Upgrade ,please wait for it and don't operate anything about it. If not, the 1328NAS system will be damage!!!



2.9.4 Save Configuration

This function backup current system configuration to a local disk, save it in a specified file name. The default file name is “config.tar”.



2.9.5 Restore Configuration

When the system configuration is destroyed, lost, or incorrectly changed, you can restore system configuration that you saved using “Save Configuration” function. Select a configuration file by windows file explorer, and press “Restore” button to restore the system configuration using the selected configuration file.

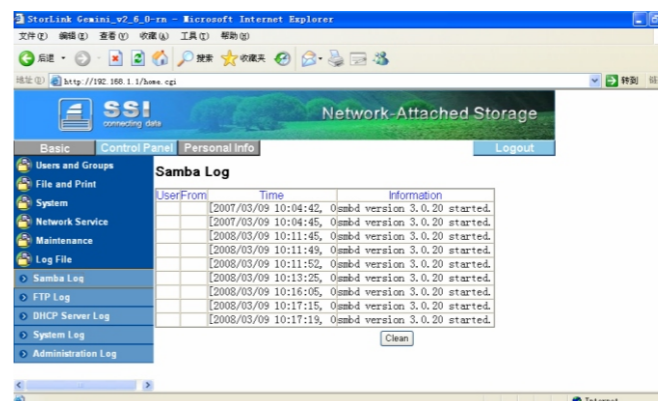
2.9.6 Factory Reset

Factory reset resets the system configuration to factory default configuration. When this button is pressed, all users, networking, and other configuration information is lost.

2.10 Log File

Five sections are included in Log File. There are “Samba Log”, “FTP Log”, “DHCP Server Log”, “System Log”, and “Administration Log”.

2.10.1 Samba Log



2.10.2 FTP Log

2.10.3 DHCP Server Log

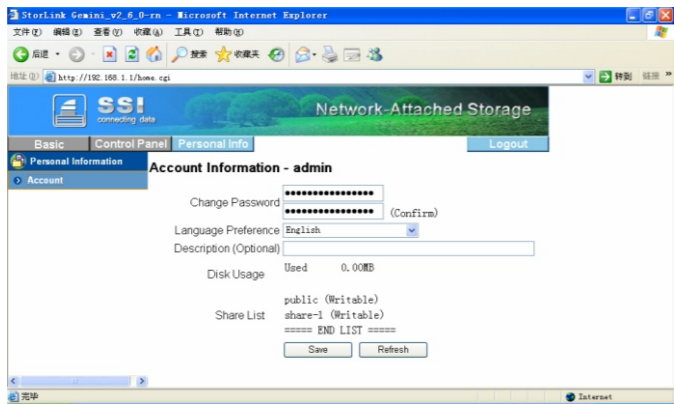
2.10.4 System Log

Specify the destination Linux PC that you want to redirect system log file.

2.10.5 Administration Log

2.11 Account

Account is the only section in “Personal Information” tab. You could change the password of user 'admin' and the language shown in the menu. Besides, share list, system disk quota and the percentage of disk used is shown as well.



2.12 Logout

